UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

FIELD BORDER

(Feet)

CODE 386

DEFINITION

A strip of permanent vegetation established at the edge or around the perimeter of a field.

PURPOSES

- Reduce soil erosion
- Provide turn rows for farm machinery
- Soil and water quality protection
- Management of harmful insect populations
- Provide wildlife food and cover
- Increase carbon storage in biomass and soils.
- Improve air quality

CONDITIONS WHERE PRACTICE APPLIES

At the edges of cropland fields and to connect other buffer practices within the field. May also apply to recreation land or other land uses where agronomic crops are grown.

CRITERIA

General Criteria Applicable to All Purposes

Minimum field border widths shall be 20 feet. Where large farm equipment is used, widths may be increased to 30 - 35 feet.

The field borders shall be established to adapted species of permanent grass, legumes, and/or shrubs. Follow the appropriate planting guidelines in the following conservation practice standards:

- Critical Area Planting (342)
- Pasture and Hayland Planting (512)
- Wildlife Upland Habitat Management (645)
- Tree/Shrub Establishment (612)

Field borders shall be established around the field edges to the extent needed to meet the resource needs and producer objectives.

Plant material, seedbed preparation, seeding rates, dates, depths, and planting methods shall be consistent with the appropriate conservation practice standard.

Native plant species may be used.

Ephemeral gullies and rills present in the planned border area shall be smoothed as part of seedbed preparation.

Additional Criteria To Reduce Soil Erosion And To Protect Soil And Water Quality

To reduce runoff and soil erosion, trap sediment and increase infiltration, locate borders around entire perimeter of the field, or as a minimum, install borders to eliminate sloping end rows, headlands and other areas where concentrated water flows will enter or exit the field.

To maintain field setback distances for manure and chemical applications, border widths will be designed to conform to minimum field application setback widths established by state or local regulations.

To reduce soil compaction, border widths will be designed to accommodate equipment parking, loading/unloading equipment, grain harvest operations, etc.

Additional Criteria For Management Of Harmful Insect Populations.

Provide a Harbor For Beneficial Insects

Include herbaceous plants that attract beneficial insects. See planning considerations for including shrubs.

Mowing, harvesting, and pesticide applications will be scheduled to accommodate life cycle requirements of the beneficial insects.

Provide a Habitat to Cause Pest Insects to Congregate

Select plants for the field border that attract pest insects.

Use mechanical, cultural, and/or chemical techniques to reduce pest populations when and where they congregate in the field border.

Additional Criteria To Provide Wildlife Food And Cover

Plants that provide wildlife food and cover shall be used.

Mowing, harvest, and weed control activities within the field border will be scheduled to accommodate reproduction and other requirements of target wildlife species. Refer to conservation practice standard Wildlife Upland Habitat Management (645) for guidelines where the primary purpose for the border is wildlife.

PLANNING CONSIDERATIONS

Field borders are more effective and provide more environmental benefits where planted around the entire field.

Field borders enhance the aesthetics and provide stability around the field edge. They also provide turn and travel areas for equipment and reduce airborne dust

To increase trapping efficiency, consider establishing a narrow strip of stiff-stemmed upright grass at the crop/field border interface.

Field borders can be used to comply with required field setback distances applicable to manure and chemical applications.

Wildlife enhancement and other benefits of native plants should be discussed during planning.

Native species should be used where feasible and meet producer objectives.

Consider overseeding the border with legumes for plant diversity and wildlife benefits.

Schedule mowing, harvesting, and weed control to accommodate wildlife nesting needs and other special requirements or purposes.

Waterbars or berms may be needed to breakup or redirect concentrated water flows within the borders.

Consider plants tolerant to sediment deposition and chemicals planned for application.

Rows of shrubs adjacent to field borders will often enhance field borders ability to harbor beneficial insects, and may also provide additional wildlife benefits.

If installation or maintenance of the practice has potential of affecting cultural resources (Archaeological, historic, historic landscape, or traditional cultural properties), follow NRCS state policy for considering cultural resources.

Additional Criteria to Improve Air Quality

Establish plant species with foliar and structural characteristics that optimize interception, adsorption and absorption of airborne particulates.

Orient shrub rows will be oriented as closely as possible to perpendicular to the prevailing wind direction during the period of concern.

Additional Criteria to Increase Carbon Storage in Biomass and Sequestration in the Soil

Establish plant species that will produce the greatest above and below ground biomass for the site.

PLANS AND SPECIFICATIONS

Plans and specifications are to be prepared for each field or treatment unit according to the criteria, planning considerations, and operation and maintenance described in this standard. The following items should be specified in the conservation plan and/or approved planning document.

- Border widths and lengths based on local design criteria
- Location within the field or farm boundary
- Vegetation to be used
- Site preparation
- Planting method
- Liming or fertilizer requirements
- Operation and maintenance requirements

OPERATION AND MAINTENANCE

Field borders require careful management and maintenance for performance and longevity.

The following will be planned and applied as needed:

- Storm damage repair.
- Sediment removal - where 6 inches of sediment have accumulated at the field border/cropland interface.
- Shut off sprayers and raise tillage equipment to avoid damage to field borders.
- Shape and reseeding border areas damaged by chemicals, tillage, or equipment traffic.
- Fertilize, mow, harvest, and control noxious weeds to maintain plant vigor.
- Ephemeral gullies and rills that develop in the border will be filled and reseeded.

REFERENCES

Field Office Technical Guide, Section IV, Practice Standards 342, 512, 645, and 612.